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| 09/839,354   | 04/20/2001  | Jay Yogeshwar        | FPD-2                    | 1842             |
| 26479  | 7590        | 04/21/2004           |                          |                  |
| STRAUB & POKOTYLO<br>620 TINTON AVENUE<br>BLDG. B, 2ND FLOOR<br>TINTON FALLS, NJ 07724 |             |                      | EXAMINER<br>DO, ANH HONG |                  |
|  |             |                      | ART UNIT                 | PAPER NUMBER     |
|  |             |                      | 2624                     | 8                |
| DATE MAILED: 04/21/2004  |             |                      |                          |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/839,354

Applicant(s)

YOGESHWAR ET AL.

Examiner

ANH H DO

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6-8,13-18,23,25 and 27 is/are rejected.
- 7) ☒ Claim(s) 2,5,9-12,19-22,24 and 26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2 and 3.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 27 recites the limitation "the preview module" in line 1. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Sethuraman et al. (U.S., Patent No. 6434196).

Regarding claim 1, Sethuraman discloses:

- analyzing image data to be encoded to determine, for each image represented

by the image data, a level of encoding complexity (col. 9, lines 27-34, teaches analyzing image data by examining the number of bits allocated to a previously encoded information frame portion to broadly determine a complexity level of the previously encoded portion and, thereby, responsively predict a complexity level of a current portion to be encoded);

- encoding said image data according to a first encoding format to generate first encoded image data (col. 5, lines 35-48, teaches encoding module 104 for encoding the image data according to an encoding mode (i.e., the first encoding format) to generate the intra/inter-coded image data);

- storing with the first encoded image data encoding complexity level information indicating at least one determined level of encoding complexity associated with the first encoded image data (Fig. 1: output buffer 160 for storing with the first encoded image data outputted from VLC 120 encoding complexity level information from rate controller 140 indicating at least one determined level of encoding complexity associated with the first encoded image data).

Regarding claim 25, Sethuraman discloses image data processing system comprising:

- an analysis module for analyzing data to be encoded and to assign one of a plurality of encoding levels of complexity to the data to be encoded (col. 9, lines 27-34, teaches a rate controller 140 corresponding to the claimed analysis module for analyzing image data by examining the number of bits allocated to a previously encoded information frame portion to broadly determine a complexity level of the

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previously encoded portion and, thereby, responsively predict a complexity level of a current portion to be encoded);

- an encoder for generating encoded data from said to be encoded (Fig. 1: VLC 120);
- a file wrapper module for incorporating an encoding complexity level identifier indicating the encoding complexity level assigned to said data to be encoded and said encoded data into a single file (Fig. 1: output buffer 160 for incorporating an encoding complexity level identifier predicted by rate controller 140 indicating the encoding complexity level assigned to said data to be encoded and said encoded data S101 from VLC 120 into a single file);
- a data storage device for storing said single file (Fig. 1: output buffer 160).

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 18 and 23 are rejected under 35 U.S.C. 102(a) as being anticipated by Dieterich (U.S. Patent No. 6100940).

Regarding claim 18, Dieterich discloses:

- performing an automated scene analysis operation on image data to be encoded to generate image content information (Fig. 1: preprocessing section 110 to extract side information (i.e., image content information));

- encoding said image data according to a first encoding format to generate encoded image data (Fig. 1: encoder 180 for encoding said image data according to a first encoding format from coding parameter selector 182 to generate encoded image data);

- storing the generated image content information in a file with the first encoded image data (Fig. 6: buffer 690).

Regarding claim 23, Dieterich discloses:

- a scene analysis module for performing scene analysis on image data to generate image content information (Fig. 1: preprocessing section 110 to extract side information (i.e., image content information));

- means for receiving additional image content information from a user of the system (Fig. 1: side information inserter 160);

- an encoder for encoding said image data according to a first encoding format to generate encoded image data (Fig. 1: encoder 180 for encoding said image data according to a first encoding format from coding parameter selector 182 to generate encoded image data);

- a storage device for storing the first encoded image data, image content description information generated by performing said content analysis operation (Fig. 6: buffer 690).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, 4, 6-8, 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sethuraman et al. (U.S. Patent No. 6434196) in view of Dieterich (U.S. Patent No. 6100940).

Regarding claim 3, Sethuraman discloses as in claim 1 above. However, Sethuraman does not teach expressly performing an automated image content analysis operation on at least one image represented by said image data and storing with the first encoded image data, image content description information generated by performing said content analysis operation.

Dieterich discloses:

- performing an automated image content analysis operation on at least one image represented by said image data (Fig. 1: preprocessing section 110 to extract side information (i.e., image content information));
- storing, with the first encoded image data, image content description information generated by performing said content analysis operation (Fig. 6: buffer 690).

Sethuraman & Dieterich are combinable because they are from image encoding system.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to perform an automated image content analysis operation on at least one image represented by said image data and store with the first encoded image data,

image content description information generated by performing said content analysis operation, in Sethuraman as taught by Dieterich.

The suggestion/motivation for doing so would have been to achieve highly efficient utilization of memory and processing resources within the encoding environment (Sethuraman: col. 2, lines 16-18).

Therefore, it would have been obvious to combine Sethuraman with Dieterich to obtain the invention as specified in claim 3.

Regarding claim 4, Dieterich teaches:

- receiving image content information from a user of the system (Fig. 1: side information inserter 160);
- storing, with the first encoded image data and the image content description information generated by performing said content analysis operation, the image content description information received from the system user (Fig. 6: buffer 690).

The motivation for combining the two references is set forth in the discussion of claim 3.

Regarding claim 6, Dieterich teaches:

- selecting, based on the determined encoding complexity level information, an image represented by the first encoded image data, to be viewed after decoding (col. 6, lines 57-63, teaches selecting an image data to be used as a reference for subsequent encoding, based on the determined encoding complexity level information as disclosed in col. 6, lines 37-39).

Regarding claim 7, Dieterich teaches:



- decoding the encoded image data representing the selected image to generate decoded image data (Fig. 7: decoder 712);

- displaying the decoded selected image on a display device (Fig. 10: output device 1020 which can be a video monitor as disclosed in col. 16, lines 56-61).

Regarding claim 8, Dieterich teaches the step of decoding the encoded image data is performed as part of said encoding step (Fig. 6: inverse DCT 665).

Regarding claim 13, Dieterich teaches generating a measure of activity (i.e., motion) of the image data (Fig. 6: motion compensation 650 and motion estimation 640).

Regarding claims 14 and 15, Dieterich teaches:

- generating a measure of the luminance variance /chrominance variance throughout at least one image represented by said image data (col. 5, lines 20-27).

Regarding claims 16 and 17, Dieterich teaches:

- generating a measure of the motion and true motion vectors between at least two complete frames, each frame corresponding to a different image (Fig. 6: motion compensation 650 and motion estimation 640); and

- storing the true motion vectors with encoded image data (Fig. 6: buffer 690).

### ***Allowable Subject Matter***

7. Claims 2, 5, 9-12, 19-22, 24, and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 2, 5, 9-12, 19-22, 24 and 26, the prior art, either taken singly or in combination, does not teach:

- determining at least one encoding parameter to be used to re-encode the decoded image data as a function of the retrieved encoding complexity level information (see claims 2 and 5);

- selecting the first encoding format from a plurality of supported encoding formats, as a function of the determined level of encoding complexity (see claims 9 and 10);

- using the retrieved encoding complexity level... the first encoding format (see claims 11 and 12);

- selecting a second encoding format to be used for outputting images represented by said encoded image data as a function of at least one of said generated content information and said additional content information (see claims 19-22);

- means for selecting,... said first encoded image data (see claim 24);

- a preview module... with said encoded data (see claim 26).

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANH H DO whose telephone number is 703-308-6720.

The examiner can normally be reached on 5/4-9.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID K MOORE can be reached on 703-308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 19, 2004.



**ANH HONG DO**  
**PRIMARY EXAMINER**